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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/291,748	04/14/1999	FREDERIC GOURGUE	Q053991	2494

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EXAMINER

SWICKHAMER, CHRISTOPHER M.

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 05/24/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/291,748

Applicant(s)

GOURGUE ET AL.

Examiner

Christopher Swickhamer

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the Amendment filed 03/30/04. The Examiner approves the changes to the drawings. Claims 1-10 are pending. Currently no claims are in condition for allowance.

Specification

2. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the *More Detailed Description* (pg. 8-12) is written using legal phraseology. The disclosure describes the invention using terminology consistent with a "means plus function" claim. Pages 8-12 must be rewritten omitting this terminology.

- A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and (c)

- Referring to the remarks on page 3, third paragraph, the Examiner notes that under 37 CFR 1.71(a), the MPEP states that "[t]he specification must include a written description of the invention . . . and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use" the invention (see MPEP 608.01). A person skilled in the electrical arts is not necessarily familiar with the "means" terminology. This language could confuse a person skilled in the art, which would make the description not enabling for **anyone** skilled in the art. Therefore,

in the effort for the instant specification to be clear and concise and in accordance with 37 CFR 1.71(a), the Examiner requires that the legal phraseology be removed.

- For example, on page 8, ln. 28 of the instant application, "means 2" could be replaced with --a spreader 2 --.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Popovic' (USP 6,393,047).

- Referring to claim 1, Popovic' discloses a transmission device enabling variable (different) spreading factors while preserving a common scrambling code (common length code for all spreading factors) for transmission in a code division multiple access cellular mobile radio system, the device comprising, channelization code spreading means for spreading blocks of symbols with the different spreading factors (Fig. 3, col. 6, lns. 1-3, 10-40); and scrambling means for applying a spreading (scrambling) code of length L (QMAX) which is a multiple of said different spreading factors ($L = SF(k) \cdot 2^k$, pg. 12, lns. 33-50), to blocks of L (Qmax) basic symbols obtained by channelization

code spreading by means with any of said variable spreading factors (pg/ 12, Ins. 33-50).

- Referring to claim 2, Popovic' discloses a transmission device enabling different spreading factors while preserving a common scrambling code for transmission in a code division multiple access cellular mobile radio system, the transmission device spreading K incoming sequences by means of K respective spreading codes of respective length $SF(k)$ (Q_k , $k=1, \dots, K$) which is a sub-multiple of a maximum length L (Q_{max}), and spreading (scrambling) the channelized (spread) sequences obtained in this way, the transmission device comprising: grouping means for grouping the data symbols of the a kth incoming sequence ($k=1, \dots, K$) into different blocks of $L/SF(k)$ (Q_{max}/Q_k) symbols (as the information enters the multiplier, Fig. 3 '52', the codes vary depending on the spreading factor. They are broken up into groups that are multiples of $2^k = L/SF(k)$) and channelization code spreading means for spreading the different blocks from the kth incoming sequence ($k=1, \dots, K$) by means of the corresponding channelization (spreading) code of length $SF(k)$ (Q_k) to obtain a channelized sequence (spread sequence) including different channelized (spread) blocks of length L (Q_{max}), spreading (scrambling) means for spreading (scrambling) each of the K spread sequences obtained in this way generated by the spreading means by applying a spreading (scrambling code) of length L (Q_{max}) which is a multiple of the channelization spreading codes (Fig. 3, col. 6, Ins. 10-40, col. 12, Ins. 33-50).

- Referring to claims 3 and 4, Popovic' teaches of a device for receiving the data transmitted in claims 1 and 2. Claims 3 and 4 are the receiver for the transmission

device of claims 1 and 2. Thus the same rejection applies to claims 3 and 4. Claims 3 and 4 are the reverse process of claims 1 and 2, which are disclosed by Popovic' (Fig. 2).

- Referring to claim 5, Popovic' discloses a mobile station for a mobile radiocommunication system, comprising a device according to claim 1 (col. 5, Ins. 1-30).

- Referring to claim 6, Popovic' discloses a base transceiver station for a mobile radiocommunication system, comprising a device according to claim 1 (col. 4, Ins. 55-68).

- Referring to claim 7, Popovic' discloses a mobile station for a mobile radiocommunication system, comprising a device according to claim 2 (col. 5, Ins. 1-30).

- Referring to claim 8, Popovic' discloses a base transceiver station for a mobile radiocommunication system, comprising a device according to claim 2 (col. 5, Ins. 1-30).

- Referring to claim 9, Popovic' discloses a mobile station for a mobile radiocommunication system, comprising a device according to claim 4 (col. 5, Ins. 1-30).

- Referring to claim 10, Popovic' discloses a base transceiver station for a mobile radiocommunication system, comprising a device according to claim 4 (col. 4, Ins. 55-68).

Response to Arguments

5. Applicant's arguments filed 10/21/03 have been fully considered but they are not persuasive.

- Referring to the argument on page 7, Ins. 1-11, applicant argues that the teachings of Popovic' are directed toward a spreading factor ($SF(k)$) and spreading code length (L) in a single operation of spreading, and that the multiplicity relationship exists between the spreading factors of the spreading code (not the channelization code) and the length of the code. The applicant argues that this is in contrast to the present invention, where the spreading and scrambling refer to distinct operations, where the scrambling is applied after the spreading. The Examiner respectfully disagrees. The instant application teaches spreading a data sequence of N symbols is performed by multiplying the data sequence of N symbols with a code of length Q . The code of length Q is also known as a spreading factor (pg. 1, Ins. 12-19). The instant application also teaches that a spread sequence is generally scrambled prior to transmission. The scrambling is accomplished by another multiplication with a scrambling sequence of length L . Typically the length of the scrambling sequence is a multiple of the spreading code (pg. 2, Ins. 16-pg. 3, Ins. 9). Thus, the second code (scrambling code) is an integer multiple of the first code (spreading code). The operation of spreading or scrambling is accomplished by multiplying the incoming sequence with the spreading code followed by a scrambling code. Similarly, Popovic' teaches of a second code that is an integer multiple of a first code (col. 3, Ins. 1-8). The first code is applied to an incoming data sequence by a multiplicative operation. The second code is then applied to the sequence by a multiplicative operation (Fig. 3). The first code is based on Orthogonal Variable Spreading Factor (OVSF) codes, which are labeled a channelization code (col. 6, Ins. 10-15). The second code applied is labeled a

spreading code, which is a multiple of the different spreading factors (col. 6, Ins. 25-32, col. 12, Ins. 32-67). Although the naming of the codes is different between the instant application and the Popovic reference, they perform the same claimed operation in the same claimed sequence. The first code applied to the incoming sequence is based on a spreading factor, which is a submultiple of the second code. The second code is a multiple of the different spreading factors of the channelization codes, and is applied by a multiplicative process after the first code. Accordingly, these operations occur consecutively, not simultaneously and are considered separate operations. Therefore, the Examiner believes that Popovic' meets the limitations for the claimed invention, and that the rejections to claims 1-10 under 102(e) are proper.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Swickhamer whose telephone number is (703) 306-4820. The examiner can normally be reached on 8-5:30 M-F, off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMS
May 19, 2004



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